

SABIC Innovative Plastics LNP STAT-KON REL42 PA 66

Category : Polymer , Thermoplastic , Nylon , Nylon 66

Material Notes:

LNP* STAT-KON* REL42 is a compound based on Nylon 66 resin containing 20% PTFE, 10% Carbon Fiber. Added features of this material include: Electrically Conductive, Internally Lubricated.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-STAT-KON-REL42-PA-66.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|-----------------------|---------------------------|---------------------------|
| Density | 1.32 g/cc | 0.0477 lb/in ³ | ASTM D792 |
| | 1.32 g/cc | 0.0477 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.600 % | 0.600 % | 50% RH, 24 hrs; ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.0036 cm/cm | 0.0036 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0030 - 0.0050 cm/cm | 0.0030 - 0.0050 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.011 - 0.013 cm/cm | 0.011 - 0.013 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.012 cm/cm | 0.012 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|-----------|----------------------|
| Tensile Strength at Break | 132 MPa | 19100 psi | ASTM D638 |
| | 133 MPa | 19300 psi | |
| Tensile Strength, Yield | 132 MPa | 19100 psi | ASTM D638 |
| | 133 MPa | 19300 psi | |
| Elongation at Break | 2.2 % | 2.2 % | ISO 527 |
| | 2.5 % | 2.5 % | |
| Elongation at Yield | 2.2 % | 2.2 % | ISO 527 |
| | 2.5 % | 2.5 % | |
| Tensile Modulus | 8.27 GPa | 1200 ksi | 50 mm/min; ASTM D638 |

| Mechanical Properties | 8.69 GPa Metric | 1260 ksi English | 1 mm/min: ISO 527 Comments |
|------------------------------|------------------------|----------------------------|--|
| Flexural Strength | 186 MPa | 27000 psi | ASTM D790 |
| | 186 MPa | 27000 psi | ISO 178 |
| Flexural Modulus | 7.40 GPa | 1070 ksi | ISO 178 |
| | 14.47 GPa | 2099 ksi | ASTM D790 |
| Izod Impact, Notched | 0.420 J/cm | 0.787 ft-lb/in | ASTM D256 |
| Izod Impact, Unnotched | 4.43 J/cm | 8.30 ft-lb/in | ASTM D4812 |
| Izod Impact, Notched (ISO) | 4.00 kJ/m ² | 1.90 ft-lb/in ² | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 29.0 kJ/m ² | 13.8 ft-lb/in ² | 80*10*4; ISO 180/1U |
| Dart Drop, Total Energy | 8.00 J | 5.90 ft-lb | Instrumented Impact Energy @ peak; ASTM D3763 |
| Impact Test | 1.00 J | 0.738 ft-lb | Multiaxial Impact; ISO 6603 |

| Thermal Properties | Metric | English | Comments |
|---|--|---|-----------------------------------|
| CTE, linear, Parallel to Flow | 79.0 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$ | 43.9 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$ | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| | 79.2 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$ | 44.0 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$ | ASTM E 831 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| CTE, linear, Transverse to Flow | 36.0 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$ | 20.0 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$ | ASTM E 831 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| Deflection Temperature at 0.46 MPa (66 psi) | 36.0 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$ | 20.0 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$ | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| Deflection Temperature at 0.46 MPa (66 psi) | 258 $\text{Å}^\circ\text{C}$ | 496 $\text{Å}^\circ\text{F}$ | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
| | 260 $\text{Å}^\circ\text{C}$ | 500 $\text{Å}^\circ\text{F}$ | unannealed; ASTM D648 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |
| Deflection Temperature at 1.8 MPa (264 psi) | 242 $\text{Å}^\circ\text{C}$ | 468 $\text{Å}^\circ\text{F}$ | Flatw 80*10*4 sp=64mm; ISO 75/ Af |
| | 247 $\text{Å}^\circ\text{C}$ | 477 $\text{Å}^\circ\text{F}$ | unannealed; ASTM D648 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-------------------|-------------------|-----------|
| Surface Resistance | 100 - 1.00e+6 ohm | 100 - 1.00e+6 ohm | ASTM D257 |

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